[0013] FIGURE 2A illustrates a pendulum mount in a stowed or supine position in accordance with an embodiment of the present invention;

[0014] FIGURE 2B illustrates a pendulum mount in a consultaion position in accordance with an embodiment of the present invention;

[0015] FIGURE 3A depicts the freedom of motion to rotate within an (x, y) associated with the display screen in accordance with an embodiment of the present invention;

[0016] FIGURE 3B depicts the freedom of motion provided by a hinged joint in accordance with an embodiment of the present invention;

[0017] FIGURE 4 illustrates how the support arm can rotate about the pendulum mount in accordance with an embodiment of the present invention;

[0018] FIGURE 5 depicts how the support arm can swing relative to the pendulum mount in accordance with an embodiment of the present invention;

[0019] FIGURE 6 further illustrates one component of the pendulum mount in accordance with an embodiment of the present invention;

[0020] FIGURE 7 further illustrates the top hinge tube of the pendulum mount that couples to the component of FIGURE 6 in accordance with an embodiment of the present invention;

[0021] FIGURE 8A depicts a first cross section view of one embodiment of one half of the hinge in accordance with an embodiment of the present invention;

[0022] FIGURE 8B depicts a top down view of one embodiment of one half of the hinge in accordance with an embodiment of the present invention;

[0023] FIGURE 8C depicts a second cross section view of one embodiment of one half of the hinge in accordance with an embodiment of the present invention;

[0024] FIGURE 9 illustrates the friction wheel which resides within the hinge components in accordance with an embodiment of the present invention;

[0025] FIGURE 10 illustrates a fully extended hinge with cables running within the hinge in accordance with an embodiment of the present invention;

[0026] FIGURE 11 illustrates a full hinge bent at 90° with cables running within the hinge in accordance with an embodiment of the present invention;

[0027] FIGURE 12 provides an example of how the support arm is balanced by tension springs in accordance with an embodiment of the present invention;

[0028] FIGURE 13A provides a cross section view of an assembled mounting assembly in accordance with an embodiment of the present invention;

[0029] FIGURE 13B provides a top down view of an assembled mounting assembly in accordance with an embodiment of the present invention;

[0030] FIGURE 14A provides a cross sectional view of the rotator of the mounting assembly in accordance with an embodiment of the present invention;

[0031] FIGURE 14B provides a top down view of the rotator of the mounting assembly in accordance with an embodiment of the present invention;

[0032] FIGURE 14C provides a side view of the rotator of the mounting assembly in accordance with an embodiment of the present invention;

[0033] FIGURE 15A provides a cross sectional view of the rotator cap used to affix the rotator to the support plate in accordance with an embodiment of the present invention;

[0034] FIGURE 15B provides a top down view of the rotator cap used to affix the rotator to the support plate in accordance with an embodiment of the present invention; and

[0035] FIGURE 16A provides a cross sectional view of support plate affixed to the display screen in accordance with an embodiment of the present invention;

[0036] FIGURE 16B provides a top down view of support plate affixed to the display screen in accordance with an embodiment of the present invention.

[0041] FIGUREs 2A and 2B depicts hinge 40 as a friction hinge. Mounting assembly 90 mechanically couples to display 38 and support arm 34 at hinge 40. The mounting assembling may have a conduit within which cables 42 run, or alternatively, these cables may exit support arm 34 and directly couple to display 38. A rotator allows display 38 to rotate +/- 360° within its XY plane relative to the mounting assembly. Hinge 40 allows display 38 to be repositioned at an angle to the longitudinal axis of support arm 34. Additionally, when support arm 34 is in a horizontal position the gas springs 36 retract to support or counterbalance the moment caused on support arm 34 by display 38. Although gas tension springs are illustrated as one means to counterbalance the moment caused by display 38, other mechanisms known to those skilled in the art may be used to counterbalance the moment. One example includes a ratcheting mechanism that locks support arm 34 at various pre-determined angles.

[0046] FIGURE 5 provides a cross-section of the present invention. Here, all cables enter through a plenum inside the pendulum mount tube or base 24. Thus, the visual exposure of the cables is minimized. Flange 28 serves to interface between the pendulum mount tube 62 and the drop ceiling 26. As shown, support arm 34 freely moves to all positions within a 180-degree arc from a non-use storage position 50 through an upright consultation viewing position 52, and supine viewing position 54. Two finely threaded tubes may facilitate the rotation of arm 34 about the pendulum mount tube 62. One may notice that as the support arm 34 transitions from storage position 50 upright, consultation position 52, and a reclined viewing position 54, that the counterbalance springs are fully extended in the upright or consultation position 52 while fully retracted in the storage position 50 for reclined viewing position 54. In the non-extended positions, the gas tension springs 36 counterbalance the moment on support arm 34 caused by display 38. Additionally, this counterbalance allows display 38 to be movable to all positions within a 180-degree arc. This is in contrast to a system employing a ratcheting system where the support arm 34 can only be positioned at discrete angles relative to the viewer.

[0047] FIGURE 6 depicts pendulum tube mount 24 in further detail. In FIGURE 6, base 60 attaches to pendulum mount tube 62 via a weld or other fastening means as known to those skilled in the art. The interior surface of pendulum mount tube 62 is threaded to receive the top hinge tube 30. This threading allows pendulum mount tube 62 to freely rotate +/- 360° degrees relative to base 60, which is coupled to the ceiling.

[0048] FIGURE 7 further illustrates top hinge tube 30 wherein threads 64 along the upper half of top hinge tube 30 match threads on the inner surface of pendulum mount tube 62. The lower portion of top hinge tube 64 need not be threaded. Mounting holes 68 receive the upper arm of a gas tension spring 36 as previously discussed in FIGURES 2A, 2B and 2C. The two-piece assembly of the top base of the pendulum mount is hollow to facilitate the internal passage of cables. Furthermore, the two-piece threaded assembly allows top hinge tube 64 to rotate freely in either direction with respect to the pendulum mount tube 62. A stop screw or other like device may be installed to limit the motion of top hinge tube 64 with respect to pendulum mount tube 62. This stop prevents the top hinge tube 64 from detaching from pendulum mount tube.

[0049] FIGURE 8 illustrates one-half of a hinge assembly. Both halves of both hinges are similar. Here, hinge assembly 66 couples to the top hinge tube 64 and is firmly attached by

being pressed into, screw threads or other mechanical fastener. Within the hinge assembly 66, thrust bearing or friction wheel 70, which is further illustrated in FIGURE 9 is placed at the junction of the two hinge assembly pieces within pocket 72. Friction wheel assembly may be constructed of nylon to prevent metal-to-metal contact when hinge assembly 66 is constructed from metal. A bolt that passes through channel 76 firmly holds two hinge assemblies 66 together to form the hinges. A cavity or passage 74 allows cables to run within hinge assembly 66 and any connected components of the pendulum mount. On the opposite end of support arm 34, hinge 42 couples to display screen 38.